

In the claims:

1 - 25. (Canceled)

26. (Currently Amended) A genetically modified or viral infected plant or cultured plant cells expressing a fusion protein including a cellulose binding peptide and a recombinant protein and a cellulose binding peptide having a heterologous signal peptide for directing said fusion protein into a cellular compartment, wherein said fusion protein is compartmentalized within a cellular compartment of cells of said plant or cultured plant cells, so as to be sequestered from cell walls of said cells of said plant or cultured plant cells, said cellular compartment is being selected from the group consisting of an endoplasmatic rericulum, a golgi apparatus, an oil body, a starch body, a chloroplastid, a chloroplast, a chromoplastid, a chromoplast, a vacuole, a lysosome, a mitochondrium and a nucleus.

27. (Canceled)

28. (Previously Presented) The genetically modified or viral infected plant or cultured plant cells of claim 26, wherein expression of said fusion protein is under a control of a constitutive or tissue specific plant promoter.

29. (Canceled)

30. (Previously Presented) The genetically modified or viral infected plant or cultured plant cells of claim 29, wherein said cellular compartment is endoplasmatic reticulum.

31. (Currently Amended) The genetically modified or viral infected plant or cultured plant cells of claim 30, wherein said heterologous signal peptide is Cel 1 or rice amylase signal peptide.

32. (Currently Amended) The genetically modified or viral infected plant or cultured plant cells of claim 30, wherein said fusion protein further includes a heterologous retaining peptide sequence as set forth in SEQ ID NO: 1 or 2.

33. (Previously Presented) The genetically modified or viral infected plant or cultured plant cells of claim 26, wherein said recombinant protein and said cellulose binding peptide are separated therebetween via an amino acid sequence recognizable and digestible by a protease or cleavable under predetermined conditions.

34. (Previously Presented) The genetically modified or viral infected plant or cultured plant cells of claim 33, wherein said predetermined conditions are selected from the group consisting of an exposure to an increased temperature, an exposure to light and an exposure to a chemical reagent.